

REMARKS

Claims 1 to 14 are pending in the application, of which claims 1 and 12 are independent. Reconsideration of the application, as amended, is requested in view of the following remarks:

Initially, the applicants thank the examiner for indicating that claims 12-14 contain allowable subject matter. The drawing objections associated with claims 12-14 are addressed in the next section.

Objection to the drawings

The examiner objected to the drawings originally submitted with the application stating "the claimed subject matter of claim 12-14 of a slot less stator having windings wound, as a single layer over the stator core must be shown or the features canceled from the claims."

The applicants respectfully submit that FIG. 8 shows a slotless stator 801 having a wire section 802 of a winding arranged in a single layer. This is compared to, for example, the slotted stator of FIG. 1 which has sections 102 of windings arranged in six layers, and the slotted stator of FIG. 2 which has sections 202 of windings arranged in four layers. The applicants respectfully request withdrawal of the objection to the drawings.

35 U.S.C. § 103 rejections

The examiner rejected claims 1-5 and 7-11 under 35 U.S.C. § 103(a) as being unpatentable over Kawamura (U.S. Patent 6,541,887) in view of *In re Leshin* (125 USPQ 416).

Kawamura discloses a motor generator with a voltage stabilizer. The motor generator includes windings laid in slots of a stator core that are grouped into more than one winding set. The winding sets are connected in series and/or parallel to continue producing a desired output voltage independently of the variations of the rotor speed in rpm.

According to the examiner, Kawamura discloses an armature winding that is arranged into layers in a slot of the stator to form a wave winding with an equal or unequal pitch as required in claim 1. However, the examiner has failed to point out where a wave winding is identified in Kawamura. At most, Kawamura discloses winding sets that are wound shifted from each other in the stator slots to form three-phase wye-connections spaced 120 electrical degrees apart.

Further, claim 1 requires that the rotor of the electric machine include 8 or more poles. With regards to the poles, the examiner states: “[the] number of poles (12) of the stator core (37) is 8 or more.” Reference number 12 of Kawamura refers to the stator slots not poles. Kawamura does not disclose a rotor having 8 or more poles.

The court in *In re Leshin* held that it is within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. The examiner contends that it would have been obvious to one of ordinary skill in the art to select iron as the material of the stator core on the basis of its suitability for the intended use. Even if iron is selected as the material of the stator core, Kawamura still does not disclose an armature winding that is arranged into layers in a slot of the stator to form a wave winding with an equal or unequal pitch, or a rotor having 8 or more poles, as required in claim 1. For these reasons, claim 1 and claims dependent from it distinguish from Kawamura in view of *In re Leshin*.

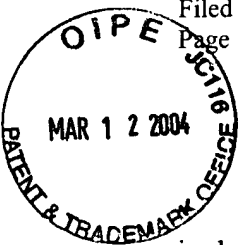
The examiner rejected claims 8 and 11 under 35 U.S.C. § 103(a) as being unpatentable over Kawamura (U.S. Patent 6,541,887) in view of *In re Aller* (105 USPQ 233). Kawamura has been discussed.

The court in *In re Aller* held that the discovery of an optimum or workable range involves only routine skill in the art where the general conditions of a claim are disclosed in the prior art. Even if it would have been obvious to one of ordinary skill in the art to select a preferred range for a number of slots (in claim 8) or the length of the iron core (in claim 11), Kawamura still does not disclose an armature winding that is arranged into layers in a slot of the stator to form a wave winding with an equal or unequal pitch, or a rotor having 8 or more poles, as required in claim 1 from which claims 8 and 11 depend. For this reason, claims 8 and 11 distinguish from Kawamura in view of *In re Aller*.

The examiner rejected claim 6 under 35 U.S.C. § 103(a) as being unpatentable over Kawamura (U.S. Patent 6,541,887) in view of *In re Leshin* (125 USPQ 416) and further in view of Maeda et al. (U.S. Patent 6,604,272; “Maeda”).

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Maeda was cited mainly for the proposition that it discloses an armature winding that includes a double-strand of wires in each layer. Even if iron is selected as the material of the stator core, neither Kawamura nor Maeda disclose an armature winding that is arranged into layers in a slot of the stator to form a wave winding with an equal or unequal pitch, or a rotor having 8 or more poles, as required in claim 1. The combination of Kawamura and Maeda do not disclose the features of claim 1 from which claim 6 depends. For this reason, claim 6 distinguishes from Kawamura in view of *In re Leshin* and further in view of Maeda.

Enclosed is a \$55.00 check for the Petition for Extension of Time fee. Please apply any other charges or credits to deposit account 06-1050.

Respectfully submitted,

Date: 3/12/04

A handwritten signature in black ink, appearing to be "Mandy Jubang", written over a horizontal line.

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